

ABSTRACT OF THE DISCLOSURE

5 **AUTOMATED CARTRIDGE EXCHANGE SYSTEM AND METHOD
FOR HIGH-DENSITY AUTOMATED TAPE LIBRARIES**

A system, method and program are disclosed for automatically exchanging tape cartridges between a plurality of automated tape libraries arranged in close proximity. The automated cartridge exchange system translates a forward and reverse stroke in a first axis directed parallel to the sidewalls of two adjacent tape libraries to a radial movement directed to a second axis perpendicular to the first axis and into and out of the tape libraries (e.g., via a pass-through port in each library). Thus, the cartridge density of the overall library system is maximized by limiting the width of the main assembly of the automated cartridge exchange system and thereby minimizing the distance between the two adjacent libraries. Also, the automated cartridge exchange system can be blind-mated to the adjacent libraries and thus provide a hot-swappable (on-line), readily serviceable component that is not available from the existing approaches. Furthermore, a plurality of such automated cartridge exchange systems can be installed between adjacent automated tape libraries to provide the redundancy not available from the existing approaches.